

Solar Panel Installations

SINGLE-FAMILY RESIDENTIAL

City of Hayward Development Services Department

2011 Update

PERMIT REQUIREMENTS

Permits are required for all solar panel installations. This handout covers the basic drawings and some key code items needed for successful submittal. Solar panel installations are not approved over the counter. There is a 10 business day turnaround for solar panel projects.

FEES

Single-family residential solar panel permit fees are subsidized by the City to encourage their installation. There is a flat fee of **\$300** for flush mounted systems. This includes plan review and inspection. For installations that require structural calculations such as non-flush mounted panels or unconventional mounting, additional structural review fees will apply.

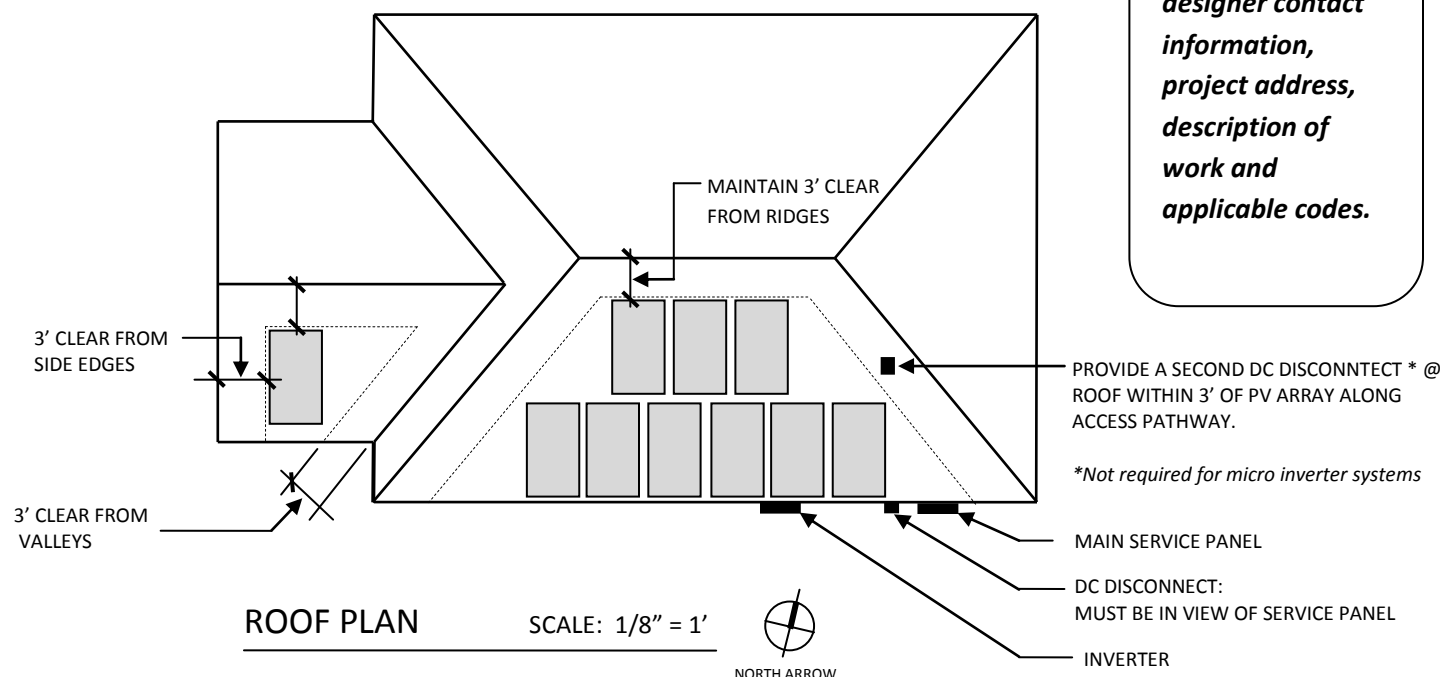
DRAWINGS

Provide the following drawings stapled together in a single set of plans. Also, staple cut sheets for all equipment specified to the back of the set. The submittal will require **4 sets of plans**.

1. ROOF PLAN: See example drawing below.

The required clearances must be maintained for Fire Department access as shown on the drawing below. Show the location of all system components on the plan such as: disconnects, service panel and the inverter. See notes for requirements.

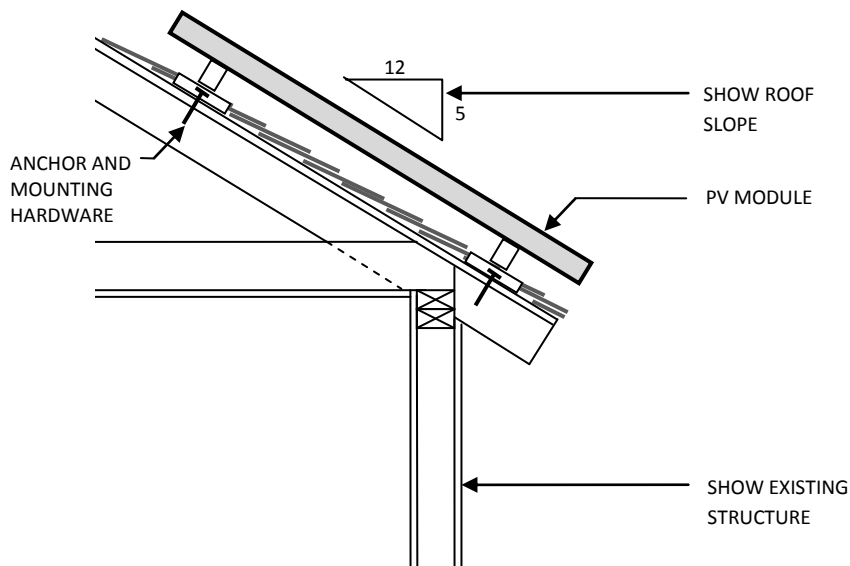
The first sheet of the set must include the designer contact information, project address, description of work and applicable codes.



2. ATTACHMENT DETAILS:

- Only use listed mounting hardware
- Verify that each component is compatible with the system
- Provide cut sheets for each product and install according to the manufacture's installation instructions
- Verify flashing, and counter flashing at roof penetrations. Install per manufactures installation instructions.

NOTE: Flush mounted panels as shown in the example drawing below do not require structural calculations. However, **panels that are tilted at a steeper angle than the roof will require structural calculations to verify wind load resistance.** The calculations must be prepared by an engineer and included with the submittal. Calculations must be stamped and signed by the engineer in order to be accepted for review.



The mounting detail shall include all components and clearly show the method of attachment. Identify the size and location of bolts and other hardware.

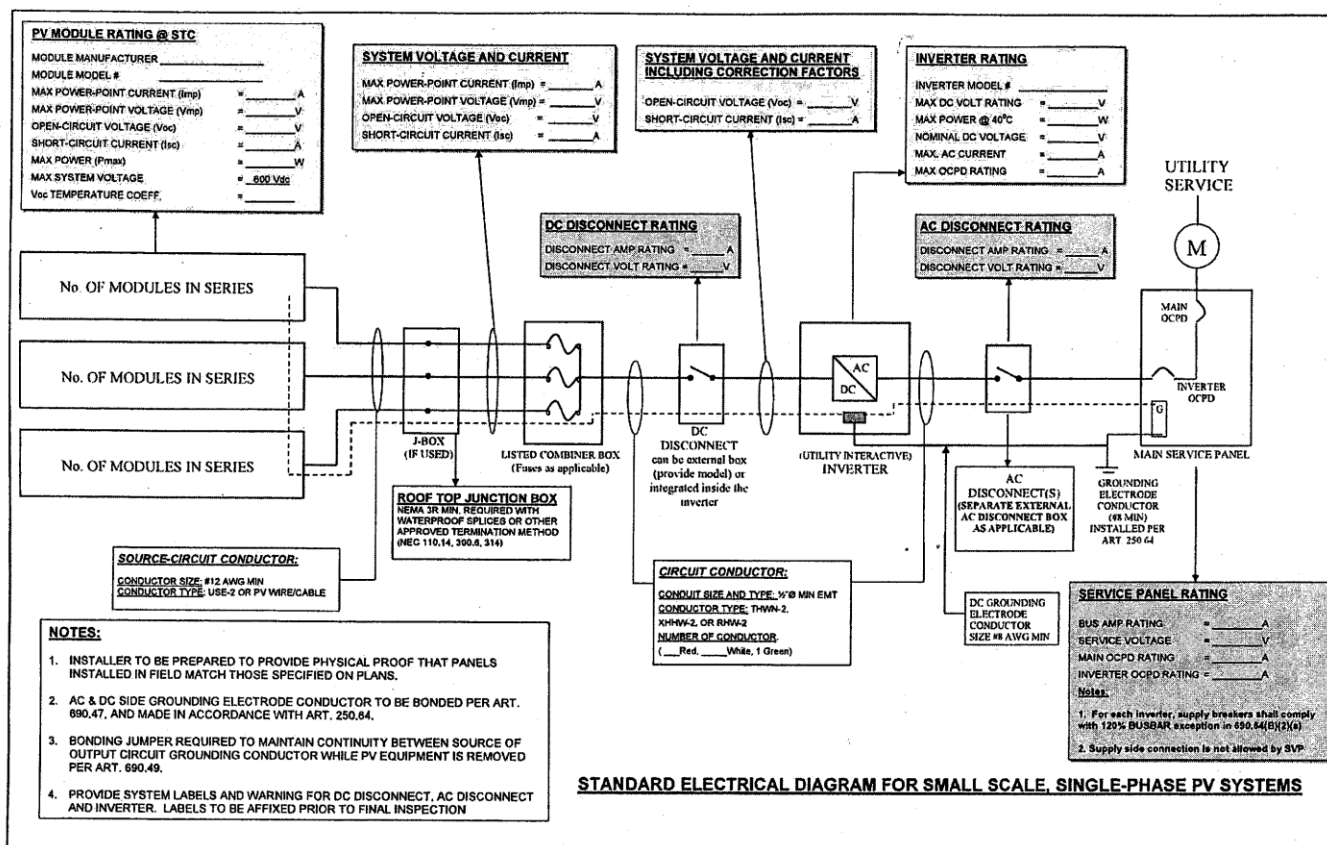
PANEL ATTACHMENT DETAIL @ ROOF NOT TO SCALE

3. SINGLE LINE DIAGRAM

- **NOTE:** It is the contractor's responsibility to fully comply with the requirements of Article 690 in the California Electrical Code. Confirm that all relevant code items are communicated in the single line drawing.
- Provide cut sheets for each component indicated on the single line diagram. This includes: inverters, disconnects and PV modules.

Commonly Missed Code Items:

1. Photovoltaic disconnecting means shall be installed at a readily accessible location at the exterior of the building. 690.14 (C) (5).
2. PV source conductors that penetrate the building shall be installed in a metallic raceway or enclosure to the first readily accessible disconnecting means located at the exterior of the building.
3. Size and locate load side tie at main service per 2010 CEC Art. 690(B)(1) through (B)(7).



TUCC Policy No. 11 (Approved 7/8/2010)

REQUIRED WARNING LABELS

Include diagrams of warning labels on the plans per Article 690 / 2010 CEC. Examples and required locations are shown below.

